

WHAT IS CLAIMED AS NEW AND IS INTENDED TO BE SECURED BY LETTERS PATENT IS:

1. A precipitated silica having the following physico-chemical characteristics:

pH (5% in water) (ISO 787-9)		3 – 8
BET surface area (DIN 66131)	(m <sup>2</sup> /g)	400 – 600
DBP absorption value (DIN 53601, in relation to dried substance)	(g/100 g)	380 – 420
Tapped density (ISO 787-11)	(g/l)	100 – 200
ALPINE sieve residue > 63μ (ISO 8130-1)	(%)	0.1 - 40

2. The precipitated silica according to Claim 1, which has the following physico-chemical characteristics:

pH (5% in water) (ISO 787-9)		3 – 8
BET surface area (DIN 66131)	(m <sup>2</sup> /g)	400 – 600
DBP absorption value (DIN 53601, in relation to dried substance)	(g/100 g)	380 – 420
Tapped density (ISO 787-11)	(g/l)	140 – 200
ALPINE sieve residue > 63μ (ISO 8130-1)	(%)	10 - 40

3. The precipitated silica according to Claim 1, which has the following physico-chemical characteristics:

pH (5% in water) (ISO 787-9)		3 – 8
BET surface area (DIN 66131)	(m <sup>2</sup> /g)	400 – 600
DBP absorption value (DIN 53601, in relation to dried substance)	(g/100 g)	380 – 420
Tapped density (ISO 787-11)	(g/l)	140 – 180

ALPINE sieve residue > 63 $\mu$ (ISO 8130-1)	(%)	1 - 10
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4. The precipitated silica according to Claim 1, which has the following physico-chemical characteristics:

pH (5% in water) (ISO 787-9)		3 - 8
BET surface area (DIN 66131)	(m <sup>2</sup> /g)	400 - 600
DBP absorption value (DIN 53601, in relation to dried substance)	(g/100g)	380 - 420
Tapped density (ISO 787-11)	(g/l)	100 - 130
ALPINE sieve residue > 63 $\mu$ (ISO 8130-1)	(%)	0.1 - 1

5. A process for manufacturing a precipitated silica according to Claim 1, which comprises:

while stirring water in a vessel with a force sufficient to subject the medium to shear containing water heated to 35°C to 45°C,

a) adding water and sulfuric acid together within at least 100 minutes, to the vessel and maintaining a pH of 6-7, wherein the addition of substances is interrupted for 60 to 120 minutes and when the addition of the substances to the vessel has been completed, a solids content of 36 to 42 g/l remains; and

b) filtering the solid matter, washing the filter cake and subjecting the solid material to a short retention drying process.

6. The process according to Claim 5, which further comprises conducting a short retention time drying process (c) by liquefying the filter cake to a solids content of less than 18% by weight and spray-drying the resulting suspension.

7. The process according to Claim 6, wherein the short retention time drying process in (c) is conducted by drying the filter cake with a spin flash dryer.

8. The process according to Claim 6, wherein the silica obtained after the short retention drying process is adjusted to pH 7 to 8 with ammonia gas.

9. The process according to Claim 6, wherein the filter cake is washed with diluted sulfuric acid.

10. A method of formulating an animal feed, comprising:  
combining the nutritive feed components of the feed with the precipitated silica of Claim 1 as a carrier.

11. A method of formulating a vitamin formulation, comprising:  
combining the vitamin components of vitamin composition with the precipitated silica of Claim 1 as a carrier.

12. A method of formulating a catalyst, comprising:  
combining the components of a catalyst with the precipitated silica of Claim 1 as a carrier for the catalytically active components of the catalyst.

13. A free-flowing composition, comprising:  
formulating the ingredients of a composition with the precipitated silica of Claim 1 which functions as a free-flow or anti-caking agent.

14. A method of converting a liquid into powder form, comprising:  
combining said liquid with the precipitated silica of Claim 1 as an auxiliary thereby converting the liquid into powder.

15. The powder prepared by the method of Claim 14.

16. An elastomer containing mixture prepared by combining an elastomer with the

precipitated silica of Claim 1.

17. A method of manufacturing a catalyst carrier, comprising:

combining the components of a catalyst carrier with the precipitated silica according to

Claim 1.